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TAG Revision 8/27/21

STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

2015 Washington State Energy Code Development

Energy Code Proposal Short Form

For editorial **Coordination, Clarifications & Corrections** only,
without substantive energy or cost impacts

Code being amended: ☐ Commercial Provisions ☐ Residential Provisions
(A MS Word version of the code is linked to the name)

Code Section # C406.13– High performance temperature maintenance system

Brief Description: Provides path to a C406.1 credit for projects incorporating design and installation of a heat pump to maintain domestic hot water recirculation temperature in lieu of electric resistance. Systems implementing this approach will result in reduced energy use compared to electric resistance heat.

Proposed code change text#

C406.13– High performance service hot water temperature maintenance system

Systems with a multi-riser service hot water circulation systems shall ~~be provided with an airsource or watersource~~ use only heat pump technology for temperature maintenance. Service hot water system delivering heating requirements using heat pump technology with a minimum COP of ~~2.0~~3.0 or UEF of 3.4. For air-source equipment, the COP rating will be reported at the design leaving heat pump water temperature with an entering dry bulb air temperature of 60°F (15.6°C) or lower and a relative humidity of 50~~%~~ percent or lower. For water-source equipment, the COP rating will be reported at the design leaving load water temperature with an entering water temperature of 74°F (23.3°C) or lower. System shall comply with C404.7.1.

TABLE C406.1
EFFICIENCY PACKAGE CREDITS

Code Section	Commercial Building Occupancy					
	Group R-1	Group R-2	Group B	Group E	Group M	All Other
	Additional Efficiency Credits					
1. More efficient HVAC performance in accordance with Section C406.2	2.0	3.0	3.0	2.0	1.0	2.0
2. Reduced lighting power: Option 1 in accordance with Section C406.3.1	1.0	1.0	2.0	2.0	3.0	2.0
3. Reduced lighting power: Option 2 in accordance with Section C406.3.2[a]	2.0	3.0	4.0	4.0	6.0	4.0

4. Enhanced lighting controls in accordance with Section C406.4	NA	NA	1.0	1.0	1.0	1.0
5. On-site supply of renewable energy in accordance with C406.5	3.0	3.0	3.0	3.0	3.0	3.0
6. Dedicated outdoor air system in accordance with Section C406.6[b]	4.0	4.0	4.0	NA	NA	4.0
7. High performance dedicated outdoor air system in accordance with Section C406.7	4.0	4.0	4.0	4.0	4.0	4.0
8. High-efficiency service water heating in accordance with Sections C406.8.1 and C406.8.2	4.0	5.0	NA	NA	NA	8.0
9. High performance service water heating in multi-family buildings in accordance with Section C406.9	7.0	8.0	NA	NA	NA	NA
10. Enhanced envelope performance in accordance with Section C406.10[c]	3.0	6.0	3.0	3.0	3.0	4.0
11. Reduced air infiltration in accordance with Section C406.11 [c]	1.0	2.0	1.0	1.0	1.0	1.0
12. Enhanced commercial kitchen equipment in accordance with Section C406.12	5.0	NA	NA	NA	5.0	5.0 (Group A-2 only)
13. High performance temperature maintenance system	TBD ~~3.0~~	TBD ~~3.0~~	TBD ~~1.0~~	TBD ~~2.0~~	TBD ~~1.0~~	TBD ~~1.0~~

a. Projects using this option may not use Item 2.
b. This option is not available to buildings subject to the prescriptive requirements of Section C403.3.5.
c. Buildings or building areas that are exempt from thermal envelope requirements in accordance with Sections C402.1.1 and C402.1.2 do not qualify for this package.

Purpose of code change:

Systems implementing this approach will result in reduced energy use compared to electric resistance heat.

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